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shown). Example interfaces include, but are not limited to, SCSI, advanced technology attachment (ATA), serial ATA, universal serial bus (USB), IEEE 1394 (FIREWIRE), and any combinations thereof. In one example, storage device 1424 (or one or more components thereof) may be remov- 5 ably interfaced with computer system 1400 (e.g., via an external port connector (not shown)). Particularly, storage device 1424 and an associated machine-readable medium 1428 may provide nonvolatile and/or volatile storage of machine-readable instructions, data structures, program 10 modules, and/or other data for computer system 1400. In one example, software 1420 may reside, completely or partially, within machine-readable medium 1428. In another example, software 1420 may reside, completely or partially, within processor 1404.

Computer system 1400 may also include an input device 1432. In one example, a user of computer system 1400 may enter commands and/or other information into computer system 1400 via input device 1432. Examples of an input device **1432** include, but are not limited to, an alpha-numeric 20 input device (e.g., a keyboard), a pointing device, a joystick, a gamepad, an audio input device (e.g., a microphone, a voice response system, etc.), a cursor control device (e.g., a mouse), a touchpad, an optical scanner, a video capture device (e.g., a still camera, a video camera), a touchscreen, 25 and any combinations thereof. Input device 1432 may be interfaced to bus 1412 via any of a variety of interfaces (not shown) including, but not limited to, a serial interface, a parallel interface, a game port, a USB interface, a FIREWIRE interface, a direct interface to bus 1412, and any 30 combinations thereof. Input device 1432 may include a touch screen interface that may be a part of or separate from display 1436, discussed further below. Input device 1432 may be utilized as a user selection device for selecting one or more graphical representations in a graphical interface as 35 described above.

A user may also input commands and/or other information to computer system 1400 via storage device 1424 (e.g., a removable disk drive, a flash drive, etc.) and/or network interface device 1440. A network interface device, such as 40 by prioritizing reconstruction errors, wherein the first face is network interface device 1440, may be utilized for connecting computer system 1400 to one or more of a variety of networks, such as network 1444, and one or more remote devices 1448 connected thereto. Examples of a network interface device include, but are not limited to, a network 45 interface card (e.g., a mobile network interface card, a LAN card), a modem, and any combination thereof. Examples of a network include, but are not limited to, a wide area network (e.g., the Internet, an enterprise network), a local area network (e.g., a network associated with an office, a 50 building, a campus or other relatively small geographic space), a telephone network, a data network associated with a telephone/voice provider (e.g., a mobile communications provider data and/or voice network), a direct connection between two computing devices, and any combinations 55 thereof. A network, such as network 1444, may employ a wired and/or a wireless mode of communication. In general, any network topology may be used. Information (e.g., data, software 1420, etc.) may be communicated to and/or from computer system 1400 via network interface device 1440. 60

Computer system 1400 may further include a video display adapter 1452 for communicating a displayable image to a display device, such as display device 1436. Examples of a display device include, but are not limited to, a liquid crystal display (LCD), a cathode ray tube (CRT), a 65 plasma display, a light emitting diode (LED) display, and any combinations thereof. Display adapter 1452 and display

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device 1436 may be utilized in combination with processor 1404 to provide graphical representations of aspects of the present disclosure. In addition to a display device, computer system 1400 may include one or more other peripheral output devices including, but not limited to, an audio speaker, a printer, and any combinations thereof. Such peripheral output devices may be connected to bus 1412 via a peripheral interface 1456. Examples of a peripheral interface include, but are not limited to, a serial port, a USB connection, a FIREWIRE connection, a parallel connection, and any combinations thereof.

The foregoing has been a detailed description of illustrative embodiments of the invention. Various modifications and additions can be made without departing from the spirit and scope of this invention. Features of each of the various embodiments described above may be combined with features of other described embodiments as appropriate in order to provide a multiplicity of feature combinations in associated new embodiments. Furthermore, while the foregoing describes a number of separate embodiments, what has been described herein is merely illustrative of the application of the principles of the present invention. Additionally, although particular methods herein may be illustrated and/or described as being performed in a specific order, the ordering is highly variable within ordinary skill to achieve methods and software according to the present disclosure. Accordingly, this description is meant to be taken only by way of example, and not to otherwise limit the scope of this invention.

Exemplary embodiments have been disclosed above and illustrated in the accompanying drawings. It will be understood by those skilled in the art that various changes, omissions and additions may be made to that which is specifically disclosed herein without departing from the spirit and scope of the present invention.

What is claimed is:

1. A method of hallucinating facial features of a first face present in an image in which a first portion of the first face is un-occluded and a second portion of the first face is occluded, the method comprising:

receiving the image of the first face, the first portion containing one or more first facial features;

training a machine-learning algorithm using a set of images each containing a region of a face of an individual corresponding to the first portion of the first face and a region of the face of the individual corresponding to the second portion of the first face so as to produce machine-learning data or receiving machine-learning data corresponding to a previous implementation of such training; and

hallucinating one or more second facial features within the second portion of the first face as a function of the machine-learning data by prioritizing reconstruction errors for hallucinating the one or more second facial features such that reconstruction error for the one or more first facial features is minimized with a higher priority than reconstruction error for hallucinating the one or more second facial features.

- 2. A method according to claim 1, wherein the first portion of the first face is a periocular region.
- 3. A method according to claim 1, wherein the machinelearning algorithm utilizes a K-SVD algorithm, a convolutional neural network algorithm, an autoencoder algorithm, a sparse filtering algorithm, a method of optimized direc-